Workshop Report:

Third Maternal and Neonatal Health Team Meeting

Antigua, Guatemala
October 1-6, 2000

Acknowledgement

The Third Maternal and Newborn Health (MNH) Team was held in Antigua, Guatemala from October 1-6, 2000.

I would like to thank CARE-Guatemala for their support, particularly CARE Coban, Dr. Lucrecia Mendez, Mary McInerney and Celia Galvez, patience and organization. I would also like to thank Jaime Stewart for her hard work in assisting in the organization of this meeting.

I know that field staff are very busy and we would like to thank the COs for their participation in this process and hope it benefits your programs.

Susan Rae Ross
Sr. Maternal and Newborn
Health Advisor

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ACROYNMS

ACNM	American College of Nurse Midwives
AED	Academy for Educations Development
ANC	Antenatal Care
BWG	Birthweight Group
CFR	Case Fatality Rate
EmOC	Emergency Obstetrical Care
IFA	Iron Folic Acid
LBW	Low Birth Weight
M&E	Monitoring and Evaluation
MOH	Ministry of Health
MNH Team	CARE's Maternal and Newborn Health Team
PPC	Post-Partum Care
STI	Sexually Transmitted Infections
TBA	Traditional Birth Attendant
TT	Tetanus Toxoid

I. Introduction

The Maternal and Newborn Health (MNH) Team meeting, held on October 1-6, 2000 in Guatemala, included 30 participants from 13 countries. We also had colleagues from the American College of Nurse-Midwives (ACNM), the Academy of Educational Development/The CHANGE Project (AED), Pearl S. Buck International and CARE-Washington. The meeting consisted of three main sessions presented below.

- A field trip, which the evaluation indicates, was useful to the participants. The visit helped to show the reality of the (field) situation, which was somewhat similar to challenges faced by many countries and it, spurred some ideas for new approaches.

- Two days of group work was organized around 8 priority MNH topics (See Table 1), with an underlying focus on improving presentation skills (see presentation guidelines in Section).

- One day, facilitated by Sofia Sprechman, devoted to reviewing CARE's M&E framework as it relates to MNH. Small groups analyze a set of data (mid-term and final evaluation from a project) and they had to make a presentation of their key findings to a major donor and the MOH in order to secure future funding.

At the end of the workshop, the evaluation findings indicate, that:

- the participants gained a lot of information and ideas from the field visit;

- the participants thought that the groups provided a useful forum for discussions and cross-fertilization of ideas and practices;

- the participants indicated that analyzing data (evaluation findings) and having to prepare and deliver a focused presentation on the key findings was a useful exercise; and

- the participants felt more confident in making presentations (which was very apparent).

The first meeting of the MNH Team was held in January 1999 in Atlanta, and the second one was also held in Atlanta in October 1999. The goal of the MNH Team (MNH) is to:

expand CARE's impact by institutionalizing best practices in CARE's field programs with a cadre of skilled staff.

The overall objectives of the MNH Team are, to:

- broaden CARE's maternal/neonatal health portfolio, geographically and/or technically; and
- improve access to MNH services, through the application of "best practices"

The objectives of this meeting (the third of the MNH Team meeting) were, to:

- update lessons learned from different countries;
- enhance the participant's abilities to make presentations; and
- improve the participant's abilities to design monitoring and evaluation systems

Since this was the third meeting of the MNH Team, we had a session about what the future might be for this team and how there could be more sharing among the countries. Some actions will include:

- developing an email list serve for specific topics;
- arranging for field staff to participate in other country evaluations to learn evaluation skills as well as to learn about the programs;
- compiling all the presentations on a CD-ROM and sent to all the countries; and
- developing a compendium of project briefs to be shared with all COs and fund raisers.

We re-assessed the topics that we had been working on and the group decided to maintain the topics (these had been weak areas that we had wanted to address)

Table 1
Lead Countries

TOPIC	LEAD	Other Countries also Working on the Topic
Birth Planning	**Bangladesh**	India, Peru, Tanzania, Uganda
Post-Partum	**Guatemala**	Bangladesh, Cambodia, India, Nepal,Tanzania
Verbal Autopsies	**India**	Bangladesh, Nicaragua
Newborn Care	**Nepal**	India, Peru, Tanzania, Nicaragua
Community Diagnosis	**Bolivia**	Haiti, Nicaragua, Peru, Sudan, China, Zambia,
Transport	**Tanzania**	Tanzania ,Bangladesh, Bolivia, Peru, Uganda, Zambia
EmOC	**Rwanda**	Bangladesh, Peru, Sudan, Tanzania, Rwanda, Cameroon, Somalia, Ethiopia, Tajikistan

Other topics that the field staff would like future training on are presented below.

- Adolescents
- Maternal Nutrition
- Behavior change: developing a behavior change communication strategy.
- Domestic Violence/Women's Status
- EmOC Services
- Birth Planning
- Newborn Care
- Gender
- National Advocacy
- Malaria and pregnancy

II. FIELD TRIP SUMMARY

The MNH Team decided that this meeting would be held in Guatemala, so that the participants would have the opportunity to visit maternal and neonatal projects in the field.

Due to the number of participants, the group was spilt into two to make the field trips more manageable. The first group visited the *CARE Guatemala's RH/post-partum project in the Verapaces Region.* The second group visited the *Maternal and Neonatal Health Project (MNH) in Sololá.* Participants were asked to consider three questions throughout the field visit.

1. What did you learn?
2. What could you apply to your own projects?
3. From lessons you have learned from your own projects that you could share with the staff here?

CARE Coban Visit

Specific objectives of the visit to CARE's Post-partum care (PPC) Project in Alta Verapaz were:

- ✓ learn about the work that is being undertaken in the Verapaces Region, especially post-partum care (PPC);
- ✓ learn about the advances and achievements of the PPC project strategies at institutional level – MSPAS; and
- ✓ learn more about the advances and achievements of the PPC project strategies at community level

During the visit, the group received a briefing about the Coban area by the CARE staff. Then we visited the health center and staff. The group also received a presentation by MOH officials and were able to ask the staff and clients questions to understand the program. After lunch, the group was spilt in two to be able to visit a community. In the village, the group received a short briefing and then to met with community leaders, community promoters, TBAs (who were men), family planning users, pregnant and post-partum women. In the evening we had a reception with the regional director of MOH and other representatives.

COBAN Questions/Answers:

Respondents from the group that visited Coban wrote that they learned about approaches to:

- foster successful coordination with local health personnel, particularly institutional credibility and interpersonal relationships;
- involve the community in diagnosing of their needs and identification/ implementation of feasible solutions;
- include PPC as a feasible intervention in other projects (e.g. child survival, Title II); and
- enhance political commitment and social mobilization, which are necessary to create positive changes in the health delivery system as well as community norms.

Respondents from this group outlined the activities, presented below, that they could apply/adapt in their own setting.

- How to incorporate community health workers' activities into the MOH data collection system.
- Strategies to strengthen training methods and supervision tools for PPC to be used in the community.
- Ways to incorporate PP home visits in other CARE projects (e.g. Title II).
- How to use information in the health posts (community maps, statistics, charts, tables, puppets, and cultural artifacts) to make clients comfortable, provide information about the community and their health needs.
- Strategies to intensify health education on PPC and EmOC within health facilities, the community and among non-governmental organizations.

Respondents from this group summarized the lessons learned from their projects that could be useful to other project managers. These included:

- ways to improve quality of care provided for breastfeeding mothers;
- examples of communication and education materials for illiterate audiences;
- approaches to strengthen supervision of and support to TBAs to deliver quality PPC; and
- strategies to foster broader involvement of stakeholders (e.g., Ministry of Agriculture) to support maternal health.

Maternal and Neonatal Health Project/JHPIEGO Visit

Respondents from the group that visited Sola wrote that they learned about approaches to:

- learn about the strategies, activities, and achievements of the MNH;
- learn about the strategies, activities, and achievements of the project at district hospital level; and
- learn about the strategies, activities, and achievements at health center and in the community (e.g., birth attendants level)

SOLOLA Responses

Respondents from the group that visited Solola wrote that they learned:

- ways to link the TBAs with the health services and maintain a good working relationship with the health staff;
- partnership is key: strategies to enhance cooperation among social organizations , NGOs, CBOs, local institutions, and health services to effectively address maternal mortality;
- that cultural beliefs are complex, especially those related to sexual/reproductive health, and they play a large role in the determining the (perceived) quality and use of services;
- approaches to strengthen transportation and referral systems function to efficiently function to successfully reduce maternal mortality;
- limitations of TBAs and ways to raise the TBAs' status within the community; and
- The importance of involving the community leaders ownership and long-term sustainability of the program.

Respondents from this group outlined the activities they could apply/adapt in their setting:

- approaches to design, implement a maternal mortality community monitoring system;
- strategies to train and supervise TBAs to provide quality PPC;
- ways to document maternal deaths and discussing these cases with women's groups and other stake holders; and
- approaches to engage community leaders (like church leaders or mayors) in problem solving.

Respondents from this group summarized lessons learned from their projects that could be useful to other project managers, including :

- ways to involve men in the reduction of maternal mortality by providing education to them related to maternal nutrition and reproductive health;
- approaches to assess cultural beliefs and practices and ensure that they are reflected in program designs/implementation/evaluations ;
- strategies to build the capacity of TBAs to practice clean deliveries, recognize danger signs and facilitate prompt referral to appropriate facilities; and
- ways to include data on newborn mortality in monitoring existing data systems.

III. WORKSHOP SUMMARY

A. Behavior Change Presentation: *Focusing on Changing Behavior to Improve Maternal Health by Mike Favin/Lonna Shafritz* The CHANGE Project

Why is it so hard to improve maternal health and survival?

- Most obstetrical and neonatal emergencies are neither predictable nor preventable –there is little time to act- although people can certainly take actions to reduce the risk of women/newborns dying, in case of an emergency.

- Women's low status negatively affects the behavior of both decision-makers and families.

Estimated average time from onset of complication to death

Ante-partum hemorrhage	12 hours
Post-partum hemorrhage	2 hours
Ruptured uterus	1 hour
Eclampsia	2 days
Obstructed labor	3 days
Puerperal sepsis	6 days

Source: Maine, D, 1990. *Safe Motherhood Programs: Options and Issues*. Center for Population and Family Health, Columbia. Cited in Carla AbouZahr and Marge Berer, "When Pregnancy Is Over: Preventing Post-Partum Deaths and Morbidity," in *Reproductive Health Matters*, 1999.

Factors Related to Maternal Deaths

A study in Egypt reviewed the factors contributing to maternal deaths. Out of 718 deaths maternal deaths, 42% were classified as having a delay in seeking care. Even though many women came late, many women also received sub-standard care that contributed to their death. Almost half (47%) of the maternal deaths were among women who received sub-standard care from an obstetrician (team) while only 12% received poor care from general practitioners and another 12% from TBAs. **Egypt: Sub-Standard Care Among Maternal Deaths , 1992-1993**

Another study found that physicians were largely responsible for maternal deaths. In a review of 205 institutional deaths, physician related behaviors were the main factor (83%) responsible for the maternal deaths, followed by patient factors (22%) and hospital factors (16%). The main factors of physician "mismanagement are presented in Table 2. (Source: **Mexico City: Hospital Study of Maternal Deaths (Bobadilla et al., 1996)**

Table 2

Types of Physician Errors,

Type of	Percent
Wrong therapy	31%
Error of surgical judgment	24%
Error of diagnosis	19%
Belated treatment	5%
Error in administration of anesthesia	5%
Poor prenatal care	3%
Other	18%
Total	**100%**

Fatima's Close Call

Fatima, 24 years old, had 4 children when she almost died. She lived with her husband Zeke and his mother, Alberta. They lived in a rural area, about 8 kms from the road that connected the interior with the capital. From the main road, it was a 30 minute bus trip to a market town with a health center and a 2-hour trip to the capital. Fatima's family was poor, but as long as the rain was good, they usually had enough to eat, except for towards the end of the hungry season. Fatima was pregnant for the fifth time. She wasn't so happy about being pregnant again, because it was hard for her to keep up her work. Her husband wasn't exactly thrilled either. .....**Fill in the story?**

Fatima and Alberta choose a new TBA to help with this delivery, since the last TBA didn't seem very satisfied with the gift they had given her. The birth came off without major problems. Ashok was a beautiful baby boy, although a bit small in size.....**Fill in the story?**

The problems started a few hours after the delivery. First Fatima started feeling hot, then she was shivering and sweating. Mary, the TBA, put a cool, wet cloth on Fatima's head and gave her some fever medicine from the chemist . But she just got hotter. .....**Fill in the story?**

Finally Fatima began having fits. Alberta, Zeke's mother, said that Fatima must be possessed by some spirit and that they should call a healer to treat her. Mary said she had seen this happen a few times before. She thought that Fatima was in great danger and should go to a health center or hospital. .....**Fill in the story?**

By the time they got to the health center, Zeke and Alberta raced in to tell the health staff that Fatima was dying, but the doctor was not there....**Fill in the story?**

When the doctor finally saw Fatima in his private clinic, even he looked concerned. They got her into bed and started giving her medicine through an "IV," a tube with liquid and a needle going into a vein.. For a while, Fatima continued with hot and shakes. Finally, she was able to rest and seemed much better after she awoke. ...**Fill in the story?**

Zeke and Mary returned to the village, leaving Alberta with Fatima. They were very relieved to find that little Ashok was alright. A neighbor who was nursing her own infant had also been feeding Ashok. He still looked small but at least he was eating well. **Fill in the story?**

After a few days, they went back to get Fatima and Alberta from the health center. It was certainly a close call for Fatima. Her family had to make a lot of difficult decisions, but at least this time, it all worked out alright in the end.

Questions

How likely is it that what happens to Fatima would also happen with women in your area?
What types of things might have happened or NOT happened here that could have had an impact on the outcome of the birth?
What actions (behaviors) might someone have taken to prevent or reduce bad things that happened at each stage? Why do/don't people often do these things?

Examples of Behavioral Factors of Low Service Utilization*

- A study in Tanzania found that 21% of women delivered at home because of the ***rudeness of health staff*** – even though they thought delivering in a health facility was safer.

- Among the Saraguaro Indians in Ecuador (and many other traditional cultures), women perceive hospital-based deliveries as entailing a ***violation of privacy***, unacceptable attendance by ***male providers***, and ***unfamiliar birth positions.***

- In Sudan, a study found that many women were ***ashamed*** of being poorly dressed in front of health workers (who were generally of a higher socioeconomic class), and were also afraid the health workers would react negatively to their illiteracy.

- In Ghana, a study found that 64% of women who died of pregnancy-related complications had sought help from an herbalist, soothsayer or other ***traditional provider*** before going to a health facility.

- In Nepal, mothers-in-law attend most deliveries, and additional care or help is sought only if the ***mother-in-law decides*** that such care is needed.

- In Benin, the government put significant pressure on women, including fines, to have institutional deliveries. Still, many women continued to deliver at home, due to the honor brought to families if they were seen as ***"stoic" during labor and childbirth.***

* Source: factsheet called "Improve Access to Maternal Health Services," published by Family Care International and the Safe Motherhood Inter-Agency Group in 1998.

Table 3
Differences in Community and Medical Preferences Regarding Delivery

Issue	*Community*	*Medical*
Primary Concerns	Modesty, privacy, well-being of woman/ making her feel good, adherence to protective customs	Proper biomedical techniques, asepsis, well-being of infant, other patients' needs, convenience of staff
Room temperature	Practices to ensure that cold is avoid	Little attention to (cold) environment
Clothing	Heavily clothed and wrapped	Light gown, limited privacy
Position in labor	Vertical	Horizontal
Movement in labor	Walking	In bed
Position in delivery	Kneeling/Squatting	Supine
Attendants	Husband, mother-in-law-TBA (people known to mother; present at mother's request)	Doctors, nurses, interns. Often times families not allowed in labor room
Care of the placenta	Treated respectfully (like a dead body)	Thrown in trash

KEY BEHAVIORAL OBJECTIVES RELATED TO MATERNAL HEALTH

Focus Behaviors: Pregnant *Women and their Families*

- Seek antenatal care at least three times during pregnancy.
- Complete ANC regimens (e.g. IFA, treatment of infection diseases).
- Plan for childbirth re: place, attendant, transport, money, blood donor.

Where there is no skilled attendant at most births: Recognize obstetric/neonatal problems during pregnancy, childbirth and /or the post-partum period.

Where there is a skilled attendant at most births: Follow the skilled provider's advice to seek care in a timely manner during pregnancy, childbirth and the post-partum period.

Focus Behaviors: *Communities*

- Foster awareness creation among women, their families/communities regarding obstetrical problems and ways that the risk's can be reduced.
- Participate in the management/improvement of local health services; creating a feedback mechanism (e.g. stakeholder committees).
- Facilitate communication/transportation links for women with obstetrical emergencies to quickly receive competent advice and services

KEY BEHAVIORAL OBJECTIVES RELATED TO MATERNAL HEALTH

Focus Behaviors: *Health Workers*

- Provide quality, client-centered care to women/newborns who seek services
- Use positive interpersonal skills to assist women and families in a respectful, culturally appropriate, and responsive manner.
- Encourage women to deliver with a skilled attendant
- Provide quality ANC services, including detection/treatment of common infections (STIs, malaria, Hookworm); promotion of appropriate nutrition and counseling on birth planning.
- Provide quality delivery services, including detection and treatment of complications and if needed prompt referral to an appropriate facility.
- Provide quality post-partum care services for both the mother and the newborn.

Focus Behaviors: *Women of Reproductive Age*

- Follow good self-care practices, avoid harmful practices, and make appropriate use of available health services
- Go for all needed immunizations against tetanus
- Delay the first pregnancy, practice birth spacing, and limit family size

Focus Behaviors: *Political and Health System Decision-makers*

- Make/support policies/norms that support the establishment of quality, client-centered essential obstetric care services.
- Provide reasonable funding for program efforts to improve maternal/newborn health services.

B. Presentation Guidelines

Lead Countries: (Bangladesh, India, Guatemala, Tanzania, Peru, Bolivia, Rwanda). Use the power point presentation template attached to guide the development of your presentation. The overall presentation on your topic will be 20 minutes. You will need to prepare your presentation to share with the other colleagues and incorporate their inputs. You can expand this somewhat, but remember, you only have 20 minutes!!!

Slide Number 1;	Overview: What are the contents of the presentation
Slide Number 2:	Problem: What problems exist (this should cover your country initially but then incorporate the other countries)
Slide Number 3:	Health Situation Findings: If there is any data that has been collected, the highlights!!!
Slide Number 4:	Program Interventions:
Slide Number 5:	Challenges to Implementation
Slide Number 6:	How they were address
Slide Number 7:	Results/Accomplishments
Slide Number 8:	Lessons Learned

Contributions to Presentations for ALL Countries: (Preparation to share country experiences based on birth planning, transport, post-partum care, verbal autopsies, essential newborn care, community diagnosis, and EmOC)

You need to bring the key points that you want to have incorporated in each of the topical groups that you might participate in. For example, in the birth planning group, Bangladesh, the lead country, will prepare the presentation and then Bangladesh will meet with Tanzania, Peru and India. Together they will refine the presentation. Your points should be organized to fit in the topics identified above in Slides 1-8. Some questions that you might want to think about are:

- ✓ What are the issues in my setting?
- ✓ What program interventions am I doing on this topic? How are they the same or different from the lead country.
- ✓ What have been the challenges I have faced in implementing these interventions?
- ✓ How have I overcome these challenges
- ✓ What have been the results and lessons learned?

In the training for the presentations you will also learn how to give productive feedback on presentations. This is an opportunity for you to help in producing the presentation and providing feedback to your colleagues.

C. M&E Presentation

The objectives of this session were to:

- review CARE's project logic.
- define M&E and review where it "fits" within CARE's program logic and cycle.
- discuss key indicators for maternal health projects.
- review information needs for baseline surveys, monitoring, midterm evaluations and final evaluation, and practice presenting M&E findings.

Some key indicators for maternal health

- Met need for obstetric complications.
- C-section as proportion of all births.
- Case fatality rate.
- Delivery with a skilled provider.

MET NEED FOR OBSTETRIC COMPLICATIONS

"Less Exact"

In a population of 100,000 people, there are about 20% of women of reproductive age (20,000). Of the women of reproductive age, about 20% are pregnant at any point in time (4,000).

Of these 4,000 pregnant women, 15% (600) will develop pregnancy related complications requiring EmOC. (see in example)

"More Exact"

Pregnancies: Multiply population by the crude birth rate (100,000 X 50/1,000 = 5,000)
Expected complications: 15% of pregnancies (5,000 x 0.15 =750)

IDEAL

Women with complications treated in facility / Total expected obstetric complications = (600) / (600) = **ideally 100%**

EXAMPLE

Women with complications treated in health facility / Total expected obstetric complications = (100) / (600) = 17%

C-SECTION AS A PROPORTION OF ALL BIRTHS

IDEAL

Women who have C-Section / Total of all births (stillbirths plus live births) = (100) / (2000) = **ideally 5%**

EXAMPLE

Women who have C-Section / Total of all births (stillbirths plus live births) = (40) / (2000) = 2%

Note: this is **NOT** facility --based; it is population based. It is the number of C-Sections that take place compared to all the births (in institutions and at home)

CASE FATALITY RATE

IDEAL

Number of obstetric deaths in the facilaity / Number of complicated deliveries in the institution = (001) / (100) = **ideally 1%**

EXAMPLE

Number of obstetric deaths in the facility / Number of complicated deliveries in the institution = (20) / (100) = 20%

Note: This is a direct reflection of the quality of care at a single institution. This can **NOT BE ADDED** between different health facilities.

DELIVERIES WITH A SKILLED PROVIDER

EXAMPLE

Women who deliver with a skilled provider / Total Number of Deliveries = (2000) / (4000) = 50%

Note: this can be facility or home based, but skilled provider does not include TBAs or other cadres that have not been trained on life-saving skills.

WOMEN WITH COMPLICATIONS DELIVERING IN FACILITIES

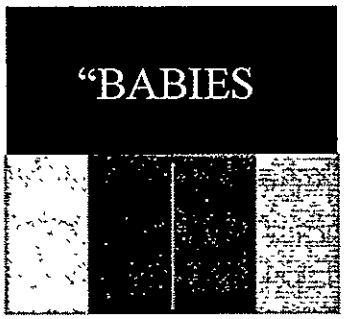
IDEAL		
Women with complications delivering in facilities	(600)	**ideally 15%**
All women delivering in institutions	(4,000)	
EXAMPLE		
Women with complications delivering in facilities	(100) =	5%
All women delivering in the institutions	(2,000)	

D. Overview of BABIES Matrix

BABIES is an assessment tool that allows program managers to organize data on newborn health. This framework provides the ability to identify the key problems related to fetal and neonatal mortality as well as select effective interventions to address them.

Basic Concepts for building BABIES:

B	BIRTHWEIGHT GROUP
A	AGE AT DEATH
B	BOXES
I	INTERVENTION
E	EVALUATION
S	SYSTEM



1. Time

Traditionally, program managers have thought in one dimension in terms of neonatal mortality. Programs have focused on gestational age and care during the first month. Interventions are selected based on their effect of the specific time period. There are several key time periods when interventions can have a major impact on a health of the mother and newborn, including 1) pre-conception, 2) during pregnancy; 3) during childbirth; 4) post-partum and 5) newborn.

2. Birthweight Group

The distribution of birthweight within a given population is often a reflection of the general health status of pregnant women. A healthy mother is the first requirement for a healthy newborn. The growth of the fetus as measured by birthweight is primarily related to maternal factors such as age, parity and spacing of pregnancies, nutrition, infections and workload. Birthweight is one of the best predictors of the newborn's survival. The probability of a baby dying or having long-term disability is closely related to birthweight.

3. BABIES: Integration of Age at Death and Birthweight Group

The processes described above, thinking solely about the timeline or only about the birth weight would be considered one-dimensional thinking. This thought process could shift to two-dimensional thinking by creating a cross-tabulation of age-at-death and birthweight group.

Age at Death (columns): Instead of looking at the time of intervention, this approach looks at the time of death to understand the contributing factors. This provides a more systemic at review of the major issues that need to be addressed.

TIME OF DEATH

During Pregnancy	During Childbirth	Post-Partum

However, it should be noted that the time periods should be based on the available data that will be analyzed. The rows can be adapted to the data available.

Birthweight Group (rows): A **birthweight group (BWG)** a is range of birthweights that may contribute to newboms suffering similar problems. For example, research has shown that newboms who weighed less than 2500 grams at birth are more likely to suffer illnesses and have higher mortality rates. Therefore we could say that newboms who weigh greater than 2500gram at birth are the "normal birthweight group". In addition, the literature shows that newboms that weigh less than 1500 grams have very poor outcomes. We could call this the "very low birth weight group"

We realize that in many settings, babies are not weighed. However, most people have some idea if the baby is a normal size (compared to other children) or are small. This is enough information to determine the birthweight group.

Birthweight Group

Small BWG		
Normal BWG		

4. BABIES Matrix

The BABIES Matrix is created by cross-tabulating time age of death (columns) and birthweight groups (rows) In many settings the quantity and the quality of data is quite poor. However, even if you make crude categories, this will provide useful information for decision-making

We first need to describe how to read a two by two table (cross-tabulation). So for example, lets assume that most newborns in this setting are not weighed, so all you can say is if they are small or normal. Then these would be the rows of the matrix. Then let's say that you can only determine the difference between stillbirths (deaths before labor) and live births (after labor), then these would be the title of the columns.

Table 4
Reading a Two By Two Table

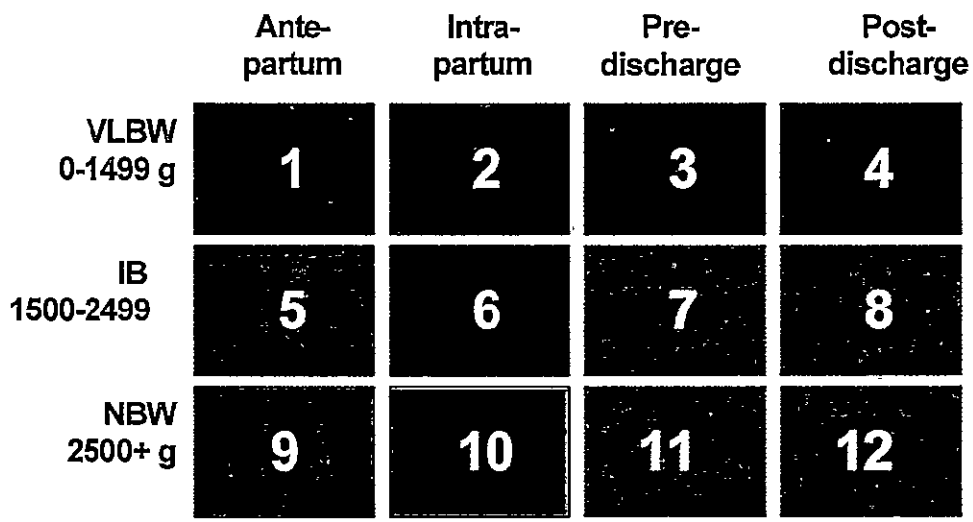
	Deaths Before The Onset of Labor	**Deaths after delivery up to 30 days**
Small BWG	**Cell 1:** If a deaths is placed in this cell it means that the baby is **small birthweight group** **AND** They were a **stillbirth**	**Cell 2:** If a deaths is placed in this means that the baby is **small birthweight group** **AND** They were **born alive** by died before the 28th day
Normal BWG	**Cell 3:** If a deaths is placed in this means that the baby is **normal Birthweight Group** **AND** They were a **stillbirth**	**Cell 4:** If a deaths is placed in this This means that the baby is **normal birthweight group** **AND** They were **born alive** by died before the 28th day

BABIES can be a very flexible tool. Both the rows (birthweight grouping) and the columns (time of death can be altered to suit local reality. For example for use in a community where birth weight is not recorded and the majority of births and deaths are at home, BABIES could have 2 rows (small and normal-sized babies) and 4 columns (before birth, first 24-hours, days 2 -7 and days 7 -28). Based on many countries programs we are going to use the 12 cell matrix, presented below to explain what can be accomplished with the BABIES Matrix. For Age at Death, we have chosen four time periods:

- **Antepartum** (28 weeks until 40 weeks))
- **Intrapartum** (from the onset of labor to 1hour after delivery)
- **Pre-Discharge** (stay in health facility, or until the attendant leaves the home)
- **Post-Discharge** (time when newborn is discharged till the 28th day)

For birthweight group we have chosen three categories

- **Very Low Birthweight Group** (less than 1500 grams)
- **Intermediate birthweight Group** (1500-2499 grams)
- **Normal Birthweight Group** (greater than 2500 grams)



Once the BABIES matrix is created, depending on the local situation, then the available data can be plotted into the different cells. This will assist the manager and stakeholders to begin to understand where the problem(s) exist. The cross-tabulation of these variables permits us to ask the question, "What are the main causes of death and interventions in each of the cells which will prevent both a maternal and infant death?"

Presented below is the data from the district hospital that was analyzed by the CARE and health staff. This process gave the CARE staff and the various health providers a very different perspective about what the problems are. While they had believed that their were problems with high rates of stillbirths, they did not think that many deaths occurred in the first 7 days of life. CARE has developed an action plan with the hospital staff to address these issues.

Table 5
Application of BABIES in Nicaragua

	Before	During			
	Onset of Labor	Delivery	0-7 days	8-28days	Total Deaths
<15000	24	12	34	11	81
1500-2499	21	9	41	22	93
>2500	48	20	39	8	115
Total	93	41	114	41	289

Orange colored cells are deaths among very LBW babies, which reflect a poor maternal heath status in the area. Deaths that occur before the onset of labor and during labor are stillbirths. Deaths that occur between 0-28 days are probably due to complications of LBW such as difficulty breathing, maintaining temperature; feeding and higher susceptibility to infection Possible interventions for stillbirths may include matemal nutrition and family planning. Possible interventions for deaths between 0-28 days are immediate breastfeeding, close monitoring, kangaroo care, and prevention of infections.

Light blue colored cells reflect the health status of pregnant women (antenatal care). All these deaths are (macerated) stillbirths. The data indicates that more could be done to provide quality antenatal care services. It is interesting to note that the majority of deaths occur among the normal BWG. This means that syphilis may be a major cause of the stillbirths.

Yellow colored cells reflect the quality of delivery care services, including emergency obstetric care and neonatal resuscitation. These deaths are fresh stillbirths or babies who die within the first hour of life. The majority of these deaths in Nicaragua occur among the intermediate LBW babies. This is probably due to some maternal complication during delivery (prolonged labor) or fetal distress such as asphyxia. In general, if the newbom survives the first week they are much more likely to live. Possible interventions would include improved EmOC services and neonatal resiscutation

Pink colored cells are deaths among intermediate and normal BW babies, which reflect a poor newborn health services. These babies should have a high survival rate since they are bom alive and have somewhat adequate weight. Possible interventions may include clean cord care, prevention of infections and hypothermia.

Light green colored cells reflect the poor health status of the newbom . Deaths are primarily among the intermediate babies who may be more susceptible to infections (e.g. ALRI, diarrhea) Similar interventions are effective such as breastfeeding, prevention of infections, hypothermia.

E. Future of the MNH Team

Participants at the MNH team meeting were asked to evaluate their experiences working with CARE's MNH initiatives and to suggest the role that CARE could play in future initiatives. Summaries of these participant reviews are shown below with the questions posed.

What benefits have you experienced from CARE-MoRR?

In their responses to this first question, participants focused on the exposure to other similar programming from around the world, supported through their involvement with the CARE-MoRR initiative. For many participants the meeting in Guatemala offered them their first trip outside of their home country. For others, from the Latin American region, the meeting offered them their first exposure to individuals from Africa, Eastern Europe, and South Asia. This kind of exchange that this creates was described as quite beneficial. Participants commented that they learned new technical approaches from their colleagues, for example:

- Different methods of working at the community level,
- strategies for promoting positive attitudes toward partnering with health staff and the MOH,
- ways to better utilize indicators for monitoring and evaluating maternal health activities,
- approaches for integrating maternal and newborn health into other (health projects (e.g. child survival, Title II),
- ways of addressing policy/advocacy as an intervention to address problems, and

One reviewer described this exchange of technical experience as "cross-fertilization". Participants commented, too, on exchanges in administrative/ managerial approaches and on their appreciation of the efforts made to strengthen their ability to give presentations. Reviewers emphasize their appreciation of the technical materials, including lessons learned and best practices related to MNH. Some participants who have been involved in the cross-visits with the CARE-MoRR project were enthusiastic about the insight that they had gleaned from these visits.

How has the MNH team affected your program?
Reviewers mentioned that the MNH team has allowed their programs, to:

- strengthened their ability to incorporate **birth planning concepts/activities**
- created an approach to initiation **verbal autopsies/case studies** and use the data for advocacy (with communities and health staff) and awareness creation as well as program refinement
- improved understanding of **emergency transport** and developed successful approaches
- strengthened their ability to incorporate **birth planning concepts/activities**
- enhanced their understanding of **newborn care** interventions and way to train community members and MOH service providers,
- improved their understanding about the importance of male involvement in MNH programs and learned about some approaches that have been successful,
- strengthened their ability to **documentation** their progress, particularly of processes,
- enhanced their ability to confidentially incorporate **new MNH indicators**, that allow they to better monitor their projects and streamlining their monitoring system.
- Provided and opportunity to broaden **dissemination of their** project's progress (e.g. CARE staff, other donors)

What should be the future role/activities for MNH Team?
Participants wrote that while they recognize the value of international meetings, regional meetings might allow greater involvement of country office staff, more directed attention to regional differences, and a focus on the capacity of region to handle region-specific situa-tions. Participants stated that an enhanced cross-visit program could allow for heighten-ed exchange of programming experiences (e.g., engaging the involvement of the MNH team in project evaluation and design).

Participants are interested in seeing the MNH team more involved in broader dissemin-ation of lessons learned on program innovations, such as analysis of neonatal and infant mortality from Tanzania and Nicaragua. One suggestion was sharing information and regular updates regularly through publications and meetings. Respondents also express-ed interest in having the MNH team help them promote advocacy activities at the central Ministry of Health level.

What, if any, reproductive health issue(s) will be on the horizon for MNH programming? Several participants suggested further integration of the following topics in programming strategies:

- HIV/AIDS considerations,
- Maternal and Child Nutrition,
- Gender integration,
- Partnership building,
- Violence against women,
- Advocacy,
- Sexually Transmitted Infection, and
- Human rights.

APPENDIX A: AGENDA

FIELD VISIT AGENDA

Oct 1, 2000	*Monday, Oct 2, 2000*	*Tues, Oct 3, 2000*
14:00: Collect Presentations Monograph Drafts	**Group 1** goes to MotherCare/JHPIEGO Site at Solola **06:30 – 09:00** Travel to Panajachel **09:00 – 10:00** Travel by boat to San Lucas Toliman **10:00 – 12:00** Visit Community Maternity Center in San Lucas Toliman **12:00 - 13:00** Travel to Panajachel **13:00 - 14:30** Lunch with JHPIEGO & presentation of MNH project **14:30 - 16:30** Visit Solola Hospital: Presentation by Hospital Director, Chief OB/GYN and others regarding EOC – project objectives, strategies, activities , and lessons learned	GROUP 1 : 6:39-10:00 **GROUP 2: 6:30 - 11:00** Transportation from Cobán to Antigua **11:30-12:30** Presentation Guidelines (Nicole King)
Group 1: Princess Hotel in Guatemala City **Group 2:** CARE site **14:00 - 17:30** Cobán. Spend the night at Park Hotel	**Group 2** Goes to CARE site at Coban **08:30 - 09:30** Presentation at CARE Verapaces office **09:30 - 10:00** Travel to Chamelco **10:00 - 12:00** Visit to Chamelco's Health Center: Presentation on how the PP component has become part of the MSPAS actions (Dr. Molina **12:00 - 13:15** Lunch in Chamelco and Video **13:15 - 14:00** Travel to Campat (group A)/ Chajcoal (group B) **14:00 - 16:30** Campat/Chajcoal - Presentation of objectives, activities and health services at the comm center and dialogue with comm members	**13:30- 14:15** Overview/Objectives (Susan) **14:15 – 15:15** Review of the field visit (Marcie) **15:30-17:30** Behavior Change Approaches (CHANGE Project)

Solola: MNH/JHPIEGO	Coban: CARE Site
1. M. A. Sabur (M)	1. Jahangir Hossain (M)
2. Muong Sopha (M)	2. Chum Sopha (M)
3. Dr. Rebecca Djao (F)	3. Purushottom Acharya (M)
4. Pascal Crussard (F)	4. Lucrecia Mendez (F)
5. Y.P. Gupta (M) (Veg)	5. Sonia Stines (F)
6. Maria Meza (F)	6. D.S. Panwar (M)
7. Raul Menses (M)	7. Maria Goyococ (F)
8. Alejandro Vargas (M)	8. Michelle Kouletio (F)
9. Luis Fernandez (M)	9. Imelda Tamwesigire (F)
10. Eleonore Seumo (F)	10. Dorothy Khombe (F)
11. Paula van den Boogaart (F)	11. Dilrabo Inomova (F)
12. Irene Banda (F)	12. Nilda Caballero (F)
13. Muborak Ismoilova (F)	13. Donna Vivio (F)
14. Nancy Obias (F)	14. Marcie Rubardt (F)
15. Edwin Mayen (M)	15. Nicole King (F)

MEETING AGENDA

	Wed Oct 4, 2000		Thurs Oct 5, 2000		Fri Oct 6, 2000
8:30-9:30	Opening Remarks	8:30-9:30	FEMME Analysis (Susan)	8:30–9:30	Review of the CARE Approach to M&E (Sofia)
9:30–10:15	Inventory Review (SUSAN)			9:30-10:30	Game of Indicators
10:15–10:30	BREAK			10:30–10:45	Break
10:30-1:00	SESSION ONE *Group 1: Birth Planning* Group 2: Community Diagnosis Group 3: Transport Group 4: Verbal Autopies	9:30-12:30	SESSION TWO Group 1: EmOC Group 2: PPC Group 3: Newborn	10:45-12:30	Group Work (Sofia)
1:00-2:00	Lunch	12:30-1:30	Lunch	12:30-1:30	Lunch
2:00-2:30	Preparation for presentations	1:30-2:30	EmOC (Cameron)	1:30-3:00	Group Work
2:30-3:15	Birth Planning (Bangladesh)	2:15-2:30	PPC (Guatemala)		
3:15-3:30	Break	3:00-3:15	Break		
3:30-4:15	Community Diagnosis (Bolivia)	3:30-4:00	Newborns (Nepal)		
4:15-5:00	Transport (Tanzania)	4:00-4:30	Nicaragua BABIES	4:00-5:00	Next steps for MNH Team (Susan/Marcie)
5:00-5:30	Verbal Autopsies (India)	4:30-5:00	Discussion of MNH Team (Marcie)	5:00–5:30	Close of the Meeting
7: 00	Cultural Night	7:00	*Video Viewing and Q&A*		

GROUPS FOR SESSION ONE: Wednesday

Group 1: Birth Planning Bangladesh Lead	Group 2: Community Diagnosis Bolivia Lead	Group 3: Transport Tanzania Lead	Group 4: Verbal Autopsies India Lead
Jahangir Hossain *	Nilda Caballero*	Michelle Kouletio*	YP Gupta*
Maria Goycochea	Dilrabo		M. A. Sabur
D. S. Panwar	Pascal Crussard	Sonia Stines	Muong Sopha
Imelda Tamwesigire	Irene Banda	Muong Sopha	Paula van den Boogaart
Chum Sopha	Lucrecia Mendez	Dorothy Khombe	Maria Meza
Muborak Ismoilova	Eleonore Seumo	Nancy Obias	Dona Vivio
Purushottom Acharya	Michael Favin	Luis Fernandez	Rebecca Djao
Lonna Shafritz	Edwin Mayen	Edgar Mendez	Alejandro Vargas
			Raul Menses

GROUPS FOR SESSION TWO: Thursday

Group 1: EmOC Cameroon Lead	Group 2: Post-Partum Guatemala Lead	Group 3: Newborns Nepal Lead
Rebecca Djao	Lucrecia Mendez*	Purushottom Acharya *
Muborak Ismoilova	Y.P. Gupta	Maria Asuncion Meza
Raul Menses		D.S. Panwar
Dilrabo Inomova	Chum Sopha	Maria Goycochea
	Pascal Crussard	M. A. Sabur
Paula van den Boogaart	Nilda Caballero	Muong Sopha
Jahangir Hossain	Dorothy Khombe	Sonia Stines
Michelle Kouletio	Alejandro Vargas	Eleonore Seumo
	Edgar Mendez	Irene Banda
Annie Clark	Edwin Mayen	Luis Fernandez
Donna Vivio	Lonna Shafritz	

Red is Spanish only speakers and * are lead countries

APPENDIX B:
PARTICPANT LIST

Name	Job Title	Project	Email Address
Dr. M. A. Sabur	HSC		sabur@carebangladesh.org
Dr. Jahangir Hossain	PC	SM	jahangir@carebangladesh.org
Luis Fernandez	PM	Our Bodies Our Health	care@carescz-bo.org
Nilda Caballero	APM	Our Bodies Our Health	carepts@cedro.pts.entelnet.bo
Sopha Chum	MCH Manager	Jivit Thmey	jvt.pur@bigpond.com.kh
Sopha Muong	MCH Manager	Jivit Thmey	jvt.sis@bigpond.com.kh
Rebecca Djao	PM	PHC	care.cameroun@camnet.cm
Lucrecia Mendez	Health Advisor		lmendez@care.org.gt
Edwin Mayen			emayen@care.org.gt
Edgar Mendez			emendez@care.org.gt
Pascal Crussard	HSC		carehaiti@pap.care.org
Sonia Stines	PM	RH 2001	stines@pap.care.org
Y.P.Gupta	RH SC		ygupta@careindia.org
D.S.Panwar	PO	Improving Women'r RH	caresitapur@careindiaup.org
Purushottam Acharya	HSC	Integrated Family Health	pa@carenep.mos.com.np
Maria Asunsion Meza	PM	SALUMAI	salumai@care.org.ni
Dr. Raul Luna Menses	APM	FEMME	lunar@aya.carepe.org.pe
Maria Perez Goycochea	IEC Cons	Project 2000	perezm@carepe.org.pe
Alejandro Vargas	APM	Enlace	vargasa@tru.carepe.org.pe
Muborak Ismoilova		FEMME	care@care.tajnet.com
Dilrabo Inomova	APC	FEMME	care@care.tajnet.com
Paula van den Boogaart	HSC	Health Sector	paula@care.tajnet.com
Michelle Kouletio	PM	CBRH	care-kwimba@africaonline.co.tz
Imelda Tamwesigire	PM	CBRH	carekba@imul.com
Eleonore Seumo	HSC		seumo.carehq@imul.com
Irene Banda	HSC		ibanda@zm.care.org
Dorothy Khombe	APM	IMR Reduction	khombe@zm.care.org
Nancy Obias	CDO	PSBI	psbico@globe.com.ph
Donna Vivio		ACNM	dvivio@acnm.org
Michael Favin		CHANGE	mfavin@smtp.aed.org
Lonna Shafritz		CHANGE	lshafrit@aed.org
Luis Tam		FEMME	tam@carepe.org.pe
Susan Rae Ross	Sr. MNH Advisor	CARE-MoRR	ross@care.org
Mary McInerney	RTA LAC	CARE-MoRR	mmcinerney@care.org.gt
Jaime Stewart	PA	CARE-MoRR	stewart@care.org
Celia Galvez	RTA LAC Asst	CARE-MoRR	cgalvez@care.org.gt
Nicole King	CARE Wash		king@dc.care.org
Judiann McNulty	CARE USA		mcnulty@care.org
Marcie Rubardt		Consultant	mrubardt@aol.com
Angie Hogue		Consultant	anghogue@racsa.co.cr
Sofia Sprechman			ssprechmann@care.org.ni
Annie Clark		ACNM	

APPENDIX C:

BEHVAIOR CHANGE TABLES

The CHANGE Project

Sample (Generic) Behavioral Analysis and Strategy

Target Group: Pregnant, Intrapartum, and Postpartum Women

Note: An actual behavioral analysis and strategy should be based on quantitative/qualitative information from the program area.

Behavioral Analysis					Behavior Change Strategy (by level of action))			
Ideal Behavior	*Current Behaviors*	*Feasible Behaviors*	*Major Barriers*	*Major Motivations*	*Individual/ Family Levels*	*Community Level*	*Health Worker/Institutional Level*	*Policy/ Advocacy Level*
As soon as hemorrhage starts seek care at a health facility.	*Many or even most women delay seeking care or do not seek it at all. *Many women seek care from relatives or local providers who cannot adequately treat hemorrhage.	The ideal behavior must be the objective, but many barriers must be reduced if most women are to follow it.	*Women, their families, or other attendants may initially consider some bleeding as not of concern or even beneficial (the body getting rid of polluting blood). *Decision may not be within the mother's control. *Husband may not give permission or may not be available to be asked. *Traditional attendant may feel s/he can handle the problem and therefore advise against going to a facility. *Decision may be to seek care but from a source that cannot give life-saving care. *Women and their families may be reluctant to go to the facility because of unpleasant or unsatisfactory past experiences, the high costs involved, shame at being attended by a male health worker, or fear of dying there. *Speedy transport may be unavailable or very expensive. *Roads may be impassible. *If hemorrhage occurs at night or on a weekend, the facility may be closed.	*The direct motivation is to avoid dying from hemorrhage to save the mother for her own sake and that of her family. *Another motivation may be to do what the family and traditional attendant advise.	*Communication to pregnant women, families, and local attendants regarding what to look for, how to decide that bleeding is excessive (dangerous), the extreme urgency of action, and where to seek care. *Families should be encouraged and helped to plan for emergencies: plans for money, transport, compatible blood donor, who will accompany. *Where needed, husbands should be strongly encouraged to leave standing permission for wives to seek emergency care.	*Communities can have standing arrangements for emergency transportation. *Community health committees or community-based workers can ensure that every pregnant women receives essential knowledge and motivation and that each has completed birth preparation plans.	*Local worker/ facility should encourage and help women plan for obstetrical emergencies. *Facilities may need to improve their equipment, supplies, operational hours, etc. so that the community has more confidence in their services. *Health workers may need skills training, attitude change, and systems support to become more sensitive and feel more responsibility towards women.	Policies may have to change regarding hours of operation, medical procedures that different categories of health workers are allowed to perform, etc.

The Pathway to Maternal Survival

(adapted from MotherCare)

PREVENTION: MATERNAL ISSUES Diet and nutrition Personal and household hygiene ANC from traditional/formal health providers Workload, activities Female genital mutilation	
RESPONSE TO COMPLICATIONS	
Overall awareness and recognition at time of occurrence Perceived severity Knowledge of appropriate life-saving actions	**Delay 1** Problem Recognition
Influentials/Treatment patterns	Decision to Seek Care
Physical mobility Distance/time to services/availability and cost of transportation Hours of facility operation Cost of services Community support systems	**Delay 2** Accessing services
Service options available to mothers How community perceptions of QOC affect use or non-use of those services Provider behavior/attitudes	**Delay 3** Qulaity EmOC services
SURVIVAL	

To understand each of these factors, one must also understand the cultural and policy context; i.e. medical standards, norms, and protocols; policy norms, social and cultural norms

CHANGE Project

Behavioral Analysis and Strategy

Target group:_____

Behavioral Analysis					Behavior Change Strategy (by level of action))			
Ideal Behavior	*Current Behaviors*	*Feasible Behaviors*	*Major Barriers*	*Major Motivations*	*Individual/ Family Levels*	*Community Level*	*Health Worker/Institutional Level*	*Policy/Advocacy Level*

Reflection Questions

Delay in Prevention/Problem Recognition - Delay 1

- What are five key behaviors for women to help prevent maternal deaths?
- What are some of the key supportive behaviors from family and friends? From health care providers?
- Do women/families in your countries recognize danger signs ? What signs do they notice and what signs do they tend to not notice?
- Once they notice a sign, do women/families tend to classify them as a problem? If yes,is this associated with a particular disease or syndrome (e.g. possessed by evil spirits). Is there a specific treatment?
- Do women/families evaluate the seriousness of these danger signs the same way? What signs do both groups consider to be serious? Are there signs that we consider dangers (e.g., bleeding) that they (women or their families) consider normal or not a problem.
- How does this (the views of women /their families) relate to how health providers (in the area) view the danger signs? What signs do both groups consider to be serious?
- If women/families perceive the situation to be serious, what do they think they should do (or what do they actually do). Is this a desirable/begin or harmful behavior to avoid mortality?

Delay in Decision to Seek Care - Delay 2

- Who is usually involved in the decision-making process to seek care? (e.g. mother-in-law, husbands , male relatives, TBAs, etc)
- Who do people seek care from first? (e.g., traditional healers, TBA, village doctor, midwife, trained doctor)?
- If most women are going to traditional providers(e.g. herbalist, TBA) first, what are the main reasons why people use traditional and other local care? What are the reasons why they do not access the "modern" health facilities?
- If most women are going to the formal health system first, what are the main reasons why people use these health facilities?
-

Reflection Questions

Delay in Access to Care

What are the most important barriers to access to care?

Transportation : affordable, dears about going out of the village, attitudes of the transport workers

Resources:

What can facilities and communities do to motivate people to overcome access barriers?

- What are the most important barriers to access to care? What can facilities and communities do to motivate people to overcome access barriers?

Reflection Questions on Quality of Care - Delay 3

Is the facility adequately equipped so those providers can provide good care:

Water for hand washing

Provision of medicine in a timely manner

- How good a job do providers and facilities do in:
  - Technically competent to deal with maternal emergencies (this includes quickly being able to assess/diagnosis the patient and either treat of refer)
  - Interpersonal communication skills to comfort both the woman and her family
  -
  - infection control
  - completion of all records
- What are the major causes of low quality in each of these areas?

Behavior-Change Strategy (by type of activity)					
Communication	*Training*	*Improvements in health service norms and systems*	*Policy changes*	*Community participation*	*Products*
Mass media and IPC for pregnant women, families, and local attendants regarding what to look for, how to decide that bleeding is excessive (dangerous), the extreme urgency of action, and where to seek care. Communication to encourage and help families to plan for emergencies: money, transport, compatible blood donor, who will accompany. Mass media and IPC for husbands to leave standing permission for wives to seek emergency care. Where TBAs are widely used, special communication may be needed to create awareness and interest in supporting desirable behaviors.	Train health facility workers in needed skills, ATTITUDES, SENSE OF SELF-EFFICACY & OF RESPONSIBILITY, CLIENT ORIENTATION. Train local health workers and/or volunteers to counsel on birth planning, especially for obstetrical emergencies and to consider heavy bleeding as an emergency that needs to be treated immediately at a health facility.	Standard procedures for rapid and competent treatment of hemorrhage may need revision and thorough dissemination. Facilities may need to improve their equipment, supplies, operational hours, etc. so that the community has more confidence in their services. Facilities may need to change many norms and standards so that conditions and services are more acceptable to women; change may include anything from room temperature, to privacy, to standard procedures (e.g., no universal episiotomies, return the placenta to the family). Changes in monitoring, supervision, supply and other systems must support changed staff orientation given in training.	Political and medical decision-makers may need to allocate more resources to maternal survival &/or rationalize the current use of resources. Policies may have to change regarding hours of operation, medical procedures that different categories of health workers are allowed to perform, etc.	A process and mechanisms should be created so the communities' preferences for health services are heard and seriously addressed. Communities should be encouraged to have standing arrangements for emergency transportation. Community health committees or community-based workers can be encouraged to ensure that every pregnant women receives essential knowledge and motivation and that each has completed birth preparation plans.	A birth preparedness card may need to be designed and widely used. One or more birth kits may be designed and sold or distributed, either through the public or private sectors.

Changes in the Safe Motherhood Initiative Strategy, 1987 to 2000

1987	2000
Antenatal care (ANC) includes risk-screening approach.	Risk screening not considered the most effective use of resources. Focus on evidence-based interventions Changes in recommendations for timing and number of ANC visits.
Routine ANC believed effective to reduce maternal deaths.	Content of ANC refocused on early detection and treatment of complications and infections. Specific preventive/promotive functions of ANC emphasized. ANC as essential link to services and education.
Relative emphasis on Emergency Obstetric Care (EMOC) within package of Essential Obstetric Care (EOC) widely debated.	Increased program focus on maternal mortality reduction and awareness that EmOC requires renewed emphasis.
Trained traditional birth attendants (TTBAs) perceived as effective to reduce maternal deaths. TBA training widely implemented.	Effectiveness of TTBAs questioned. Role of TBAs shifts towards social/ cultural support, link to professional birth attendance and health system.
Major objective was delivery assisted by trained attendant (including TBAs) for all births.	Major objective is skilled (professional) birth attendance for all births. "Enabling environment" (transport, referral care, drugs, supplies, equipment) recognized as important. Pre-service, in-service, and refresher training all used to create skilled attendants.
Clean birth, safe birth kits.	Clean and safe birth included in birth preparedness communication; emphasis also on planning in advance for skilled birth attendant, birth location, finance for emergencies, transport, and social support; arrangements for early, skilled postpartum care.
Postpartum care primarily conceptualized as conventional 6-week postpartum mother/infant visit.	Wider recognition that most maternal and newborn deaths occur at birth or during early postpartum period. New schedule for PNC at 1, 3, 7 days emphasized.
1987	**2000**

APPENDIX D:

M&E PRESNTATIONS